Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1. (currently amended) [[A]] An isolated biopolymer marker ~~selected from the group consisting of SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5 or at least one analyte thereof useful in indicating at least one particular disease state~~ peptide consisting of SEQ ID NO:2 diagnostic for insulin resistance.

Claims 2-38. (cancelled)

Claim 39. (new). A method for diagnosing insulin resistance comprising:

(a) obtaining a sample from a patient;

(b) conducting mass spectrometric analysis on said sample in a manner effective to maximize elucidation of discernible peptide fragments contained therein; and

c) comparing mass spectrum profiles of a peptide consisting of SEQ ID NO:2 to mass spectrum profiles of peptides elucidated

from said sample; wherein recognition of a mass spectrum profile in the sample displaying the characteristic profile of the mass spectrum profile for the peptide consisting of SEQ ID NO:2 is diagnostic for insulin resistance.

Claim 40. (new). The method of claim 39, wherein the sample is an unfractionated body fluid or a tissue sample.

Claim 41. (new). The method of claim 39, wherein said sample is selected from the group consisting of blood, blood products, urine, saliva, cerebrospinal fluid, and lymph.

Claim 42. (new). The method of claim 39, wherein said mass spectrometric analysis is selected from the group consisting of Surface Enhanced Laser Desorption Ionization (SELDI) mass spectrometry (MS), Maldi Qq TOF, MS/MS, TOF-TOF, ESI-Q-TOF and ION-TRAP.

Claim 43. (new). The method of claim 39, wherein said patient is a human.

Claim 44. (new). An insulin resistance diagnostic kit comprising: (a) a peptide consisting of SEQ ID NO:2, and (b) and antibody that binds to said peptide in a sample from a patient.

Claim 45. (new). The diagnostic kit of claim 44, wherein said antibody is immobilized on a solid support.

Claim 46. (new). The diagnostic kit of claim 44, wherein said antibody is labeled.

Restriction/Election

Restriction to one of the following inventions has been required under 35 USC 121:

I. Claims 1-2, drawn to biopolymer markers, classified in class 436, subclass 512.

II. Claims 3-9, drawn to a method for evidencing and categorizing at least one disease state, classified in class 435,subclass 69.2.

III. Claims 10-32, drawn to a diagnostic assay kit using polyclonal antibody for determining the presence of the biopolymer markers or analytes, classified in class 436, subclass 86.

IV. Claims 33-37, drawn to a process for identifying therapeutic avenues related to a disease, classified in class 422, subclass 119.

V. Claim 38, drawn to a process for regulating a disease, classified in class 435, subclass 7.1.

The Examiner has also required a Sequence Election Requirement applicable to all groups.

In addition, each detailed Group above reads on patentably distinct sequences (SEQ ID NO:1, SEQ ID NO:2, SEQ ID NO:3, SEQ ID

NO:4, SEQ ID NO:5). Each sequence is patentably distinct because they are unrelated sequences, therefore, restriction is deemed proper and applied to each Group. For an elected Group drawn to amino acid sequences (Group I, II, III, IV, or V), the Applicant must further elect a single amino acid sequence for consideration.